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IN THE CLAIMS

6/28/2006 Please amend the claims as follows:

gD
Claim 1 (Currently Amended): A hybrid protein comprising consisting essentially of:
an ABC transporter membrane protein comprising a ligand-binding portion of MRP1,
a spacer, and

an ATP-sensitive potassium ion channel portion of Kir 6.2 from the Kir family which
is not naturally coupled to said ABC transporter membrane protein, and, optionally,
a tag,

wherein said spacer is between said ABC transporter membrane protein and said
ATP-sensitive potassium channel, and

wherein said membrane protein, spacer, and potassium channel are functionally
coupled so that ligand binding to the ABC transporter membrane protein transduces a signal
to the potassium channel that produces an electrical signal.

Claim 2 (Cancelled).

Claim 3 (Previously Presented): The hybrid protein of claim 1, wherein said spacer
consists of six glycine or ten glutamine residues.

Claim 4 (Withdrawn): The hybrid protein of claim 1, which comprises a tag[[,]] to
facilitate the detection and/or the purification of said hybrid protein.

Claim 5 (Currently Amended): The hybrid protein of claim 1, which comprises SEQ
ID NO: 1

wherein said membrane protein is a receptor.